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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,706	02/13/2001	Yoshio Hagihara	15162/03270	5328

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SIDLEY AUSTIN BROWN & WOOD LLP  
717 NORTH HARWOOD  
SUITE 3400  
DALLAS, TX 75201

[REDACTED] EXAMINER

HO, ALLEN C

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/782,706	HAGIHARA, YOSHIO
	<b>Examiner</b>	<b>Art Unit</b>
	Allen C. Ho	2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A. SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 August 2002.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 10-16 is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 February 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant disclosed an image-sensing device comprising a temperature sensor positioned in the image-sensing device to measure the ambient temperature of the image-sensing device. However, without specifically claiming where the temperature sensor is positioned in claim 1, the ambient temperature could be any temperature.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

- (e) the invention was described in-
- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
  - (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinotsuka *et al.* (U. S. Patent No. 6,191,408 B1).

Shinotsuka *et al.* disclosed an image-sensing device comprising: a photoelectric conversion portion (1) that outputs an analog electrical signal natural-logarithmically proportional to an amount of incident light, wherein the photoelectric conversion portion comprises a photosensor (photodiode) and a transistor (Fig. 2) that is connected in series with the photosensor; and an output circuit that includes a temperature sensor (14) and that corrects the analog electrical signal output from the photoelectric conversion portion on a basis of ambient temperature detected by the temperature sensor, wherein the output circuit generates a factor ( $\alpha_T$ ) that varies with the ambient temperature inside the image-sensing device as detected by the temperature sensor, and multiplies an output from the photoelectric conversion portion by the factor (Fig. 12).

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi *et al.* (U. S. Patent No. 6,075,562) in view of Takada *et al.* (U. S. Patent No. 4,973,833).

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Sakaguchi *et al.* disclosed an image-sensing device comprising: a photoelectric conversion portion (103) that outputs an analog electrical signal, wherein the photoelectric conversion portion comprises a photosensor and a transistor (inherent, this is just a switch); and an output circuit that includes a temperature sensor (130) and that corrects the analog electrical signal output from the photoelectric conversion portion on a basis of ambient temperature detected by the temperature sensor.

However, Sakaguchi *et al.* did not teach that the photoelectric conversion portion outputs an analog signal natural-logarithmically proportional to an amount of incident light.

Takada *et al.* disclosed an image sensor that includes logarithmic converters, which convert analog electric signals into signals that are natural-logarithmically proportional to an amount of incident light.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to convert analog electric signals into signals that are natural-logarithmically proportional to an amount of incident light, since a person would be motivated to increase the dynamic range of an image sensor.

7. Claims 1 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka *et al.* (U. S. Patent No. 5,335,072) in view of in view of Takada *et al.* (U. S. Patent No. 4,973,833).

Tanaka *et al.* disclosed an image-sensing device comprising: a photoelectric conversion portion (2) that outputs an electrical signal, wherein the photoelectric conversion portion comprises a photosensor and a transistor (inherent, this is just a switch); and an output circuit that includes a temperature sensor (17) and that corrects the electrical signal output from the

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photoelectric conversion portion on a basis of ambient temperature detected by the temperature sensor.

However, Tanaka *et al.* did not teach that the photoelectric conversion portion outputs an analog signal natural-logarithmically proportional to an amount of incident light.

Takada *et al.* disclosed an image sensor that includes logarithmic converters, which convert analog electric signals into signals that are natural-logarithmically proportional to an amount of incident light.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to convert analog electric signals into signals that are natural-logarithmically proportional to an amount of incident light, since a person would be motivated to increase the dynamic range of an image sensor.

#### *Allowable Subject Matter*

8. Claims 4-6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The allowable subject matter in claims 4-6 refers to specific constructions of an output circuit; these constructions are neither shown nor fairly suggested in the prior art.

10. Claims 10-16 are allowed.

11. The following is an examiner's statement of reasons for allowance:

The allowable subject matter in claims 10-16 refers to an image-sensing device comprising: a plurality of pixels of which each outputs a plurality of color signals proportional to amounts of light received in different color ranges; an initial state setting portion that corrects the plurality of color signals output from each pixel in such a way that the color signals have a specific correlation with one another at a given color temperature; a color temperature detection portion that detects a color temperature of a subject to be sensed; and a white balance adjustment portion that further corrects the plurality of color signals already corrected by the initial state setting portion in such a way that the color signals have the specific correlation with one another at the color temperature detected by the color temperature detection portion.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Response to Arguments*

12. Applicant's arguments filed 06 August 2002 have been fully considered but they are not persuasive.

The applicant argues that Sakaguchi *et al.* and Tanaka *et al.* did not disclose an image-sensing device that performs temperature compensation itself, but the temperature compensation is performed at a later stage after the image-sensing device. The examiner respectfully disagrees. The recitation "image-sensing device" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable

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weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Thus the entire circuit disclosed by these references could be construed as an "image-sensing device", and temperature compensation performed anywhere in the circuit would read on the claim.

The applicant further contends that Sakaguchi *et al.* and Tanaka *et al.* did not disclose an output circuit that corrects an analog signal output from a photoelectric conversion portion on the basis of detected ambient temperature. On the contrary, since the applicant fails to claim at what stage (*e. g.*, before A/D conversion) the temperature compensation takes place, the output circuits disclosed by Sakaguchi *et al.* and Tanaka *et al.* would read on the claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (703) 308-6189. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached at (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Allen C. Ho  
Examiner  
Art Unit 2882

ACH  
January 2, 2003

*ACH*  
ALLEN C. HO  
EXAMINER  
TELEPHONE NUMBER (703) 308-0530